Jan. 4, 1938. G. J. PORTER 2,104,524

COMBINATION BOOK HOLDER, WRITING AND STUDY BOARD

Filed July 2, 1936 2 Sheets-Sheet 1

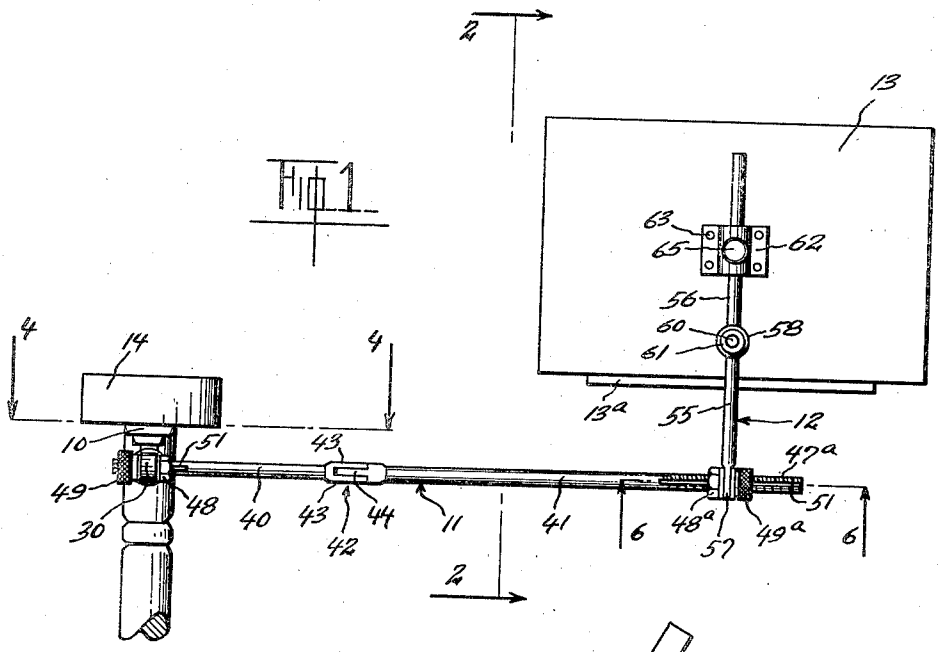


FIG. 1

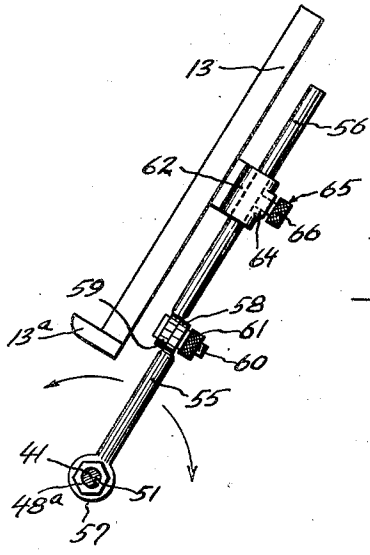


FIG. 2

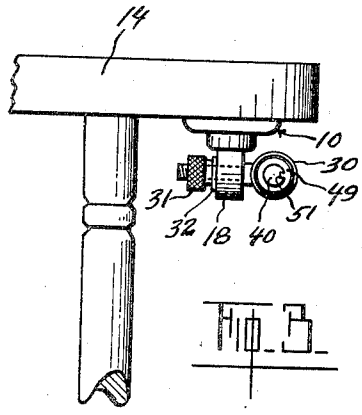


FIG. 3

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COMBINATION BOOK HOLDER, WRITING AND STUDY BOARD

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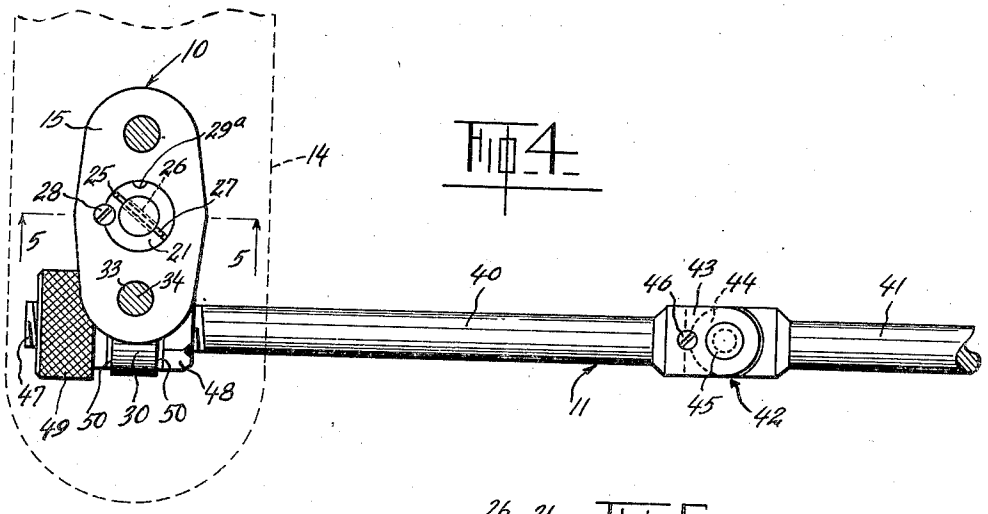


FIG. 4

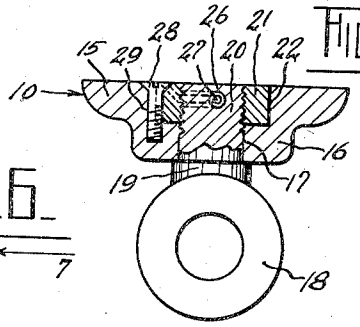
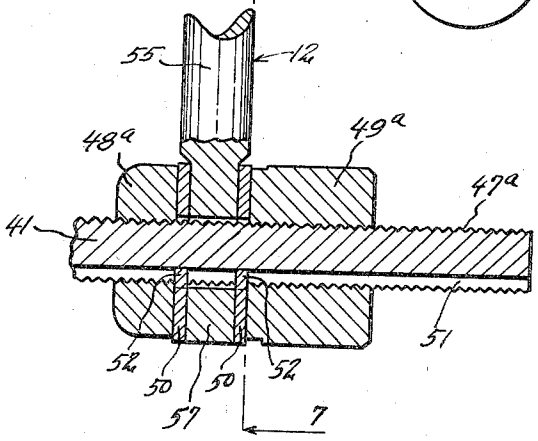


FIG. 5

FIG. 6



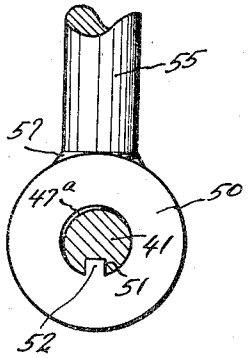


FIG. 7

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2,104,524

COMBINATION BOOK HOLDER, WRITING AND STUDY BOARD

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Application July 2, 1936, Serial No. 88,603

1 Claim. (Cl. 248—278)

This invention relates to a combination book holder, writing and study board.

The principal object of this invention is to provide a device of the above character which is adapted to be attached to the arm of a chair to support an easel or board which may have the combined functions of a book holder, writing and study board, and which is further adapted to be placed in a position where the same will not interfere with the use of the chair as such.

Another object of the invention relates to the construction of the device that will permit of the same being attached to any type of chair and which will permit the placement of the easel or board in any desired position for use.

Further objects of the invention relate to the adjustable features of its construction, its structural simplicity, ease of operation and adaptability to securely hold a book supported thereon or when used as a writing board, at any level, distance and angle to suit the particular requirements of a person occupying the chair with which the device is associated.

Other objects of this invention, not at this time more particularly enumerated, will be more clearly understood from the following detailed description of the same.

An illustrative embodiment of the invention is shown in the accompanying drawings, wherein:

Figure 1 is an elevational view of the device in its mounted position on the arm of a chair.

Figure 2 is a view taken on line 2—2, Figure 1, showing an end elevational view of the easel or board.

Figure 3 is a side view of the chair arm showing the supporting element of the device in side elevation.

Figure 4 is a top plan view of the supporting element and arm taken on line 4—4, Figure 1, the arm of the chair being shown in dotted outline.

Figure 5 is a transverse sectional view of the supporting element taken on line 5—5, Figure 4.

Figure 6 is a detail view in section taken on line 6—6, Figure 1 showing the manner of supporting the board carrying element on the end of the arm of the device.

Figure 7 is a detail sectional view of the end of the arm taken on line 7—7, Figure 6, showing the washer and arm construction.

Referring to the drawings, the device is shown as consisting generally of a mounting bracket 10 which acts as the supporting element therefor, a main or supporting arm 11, an auxiliary or supported arm 12 and a board 13. The mounting bracket 10 is attached to the underside of a chair arm 14.

The mounting bracket 10, see Figures 4 and 5, comprises a base 15, provided with a central boss 16 having a bore 17 therein. An annular eye 18 having a stem 19 terminating in a threaded extension or bolt 20 of reduced diameter is rotatably mounted within the bracket 10, the bolt 20 fitting within the bore 17 and provided with a circular nut 21 that is snugly seated within a circular recess 22 provided in the base 15; the construction being such that the outside face of the nut 21 is flush with the surface of the base 15, and to permit turning movement of the eye 18 relative to the bracket 10. To lock the nut 21 to the bolt 20, the same is provided with a groove 25 adapted to register with a transverse opening 26 in the bolt 20, through which a pin 27 is inserted with the ends thereof lying in the groove 25, as clearly shown in Figure 4. In some cases when it is desired to lock the eye 18 against turning movement relative to the bracket 10, for a purpose to be hereinafter described there is provided a screw 28 threaded into an opening 29 defined in part by the wall of the circular recess 22 and in part by the wall of the nut 21. This opening 29 is so disposed that the eye 18 will have a transverse position at right angles to the longitudinal axis of the bracket 10. A similar part opening 29a is provided on the nut 21, spaced 90° thereon whereby the same may be brought into registry with the corresponding part opening in the base 10 so as to lock the eye 18 in the plane of the longitudinal axis of the bracket.

Fitted within the eye 18 of the bracket 10 is an eye-bolt 30 that is securely held thereon by a nut 31, see Figure 3, there being provided if so desired a washer 32 between the nut 31 and the adjacent face of the eye 18. The bracket 10 is provided with longitudinally spaced openings 33 for the reception of screws 34, (shown only in section, Figure 4), to attach the same to the chair arm 14. In some cases it may be desirable to provide similar openings 33 on the bracket base 15 in the transverse plane thereof to accommodate two additional screws.

Arranged to be supported by the bracket 10 and eye-bolt 30 carried thereby, is the main arm 11 of the device. The arm 11 is composed of two solid bars or rods 40 and 41 of unequal length, respectively and connected together by a hinge joint 42. The arm section 40 is provided with a bifurcated end having flattened legs 43 which receive therebetween in frictional engagement a flattened mating extension 44 formed on the end of the other arm section 41; the whole being held in assembled relation by the rivet or screw 45. To lock the hinge joint 42 there is provided a screw 46 which engages both the legs 43 and the extension 44 to prevent relative movement therebetween. Preferably the screw 46 is of the same size as the screw 28 so as to be interchangeable.

The other end of the arm section 40 is thread-

ed as at 47 and is of a size to snugly fit within the eye-bolt 30. An inner nut 48 and an outer nut 49, with washers 50 abutting each face of the eye-bolt 30, securely mount in adjusted position the arm section 40 on said eye-bolt (and mounting bracket 10) to permit rotational movement thereof. The threaded portion 47 is provided with a longitudinal key-way 51 for the entire length thereof and the washers 50, see Figure 7 are each provided with a radial lug 52 to fit within the key-way. Thus the washers 50 while able to move longitudinally of the threaded portion 47, in the adjustment of the same, cannot turn thereon so that when in frictional engagement with the faces of the eye-bolt 30 by virtue of the clamping action of the nuts 48 and 49 the arm section 40 is firmly held in position. In the same manner the other end of the arm section 41 is formed with a threaded portion 47a provided with a key way 51, washers 50, a nut 48a and a knurled nut 49a.

Carried by the longer arm section 41 of the main arm 11 is an auxiliary arm 12. This arm 12 comprises a lower section 55 and an upper arm section 56 formed of a bar or rod of substantially the same size as that employed in the main arm 11. The arm section 55 is formed at each end with flattened eyes 57 and 58 arranged in planes at right angles to each other, the lower eyes 57 being arranged on the threaded portion 47a in adjusted position thereon and clamped in place between the washers 50 and nuts 48a and 49a. The clamping pressure exerted by the nuts 48a and 49a is sufficient to hold the arm section 55 in any angular adjusted position on the threaded portion 47a of the arm 11 while at the same time permitting angular movement thereof in the direction of the arrows, see Figure 2. Of course the clamping pressure could be such as to preclude any rotational or angular movement. As described above, the washer 50 construction is such that the same cannot turn on the arm 11 whereby loosening of the nuts 48a and 49a is prevented. Further clamping pressure of the washers 50 on the flattened eye 57 may be achieved by dishing the washers 50 to provide a certain degree of resiliency therein, or both the washers 50 and eye 57 may be beveled at one side thereof to allow the same to be drawn together, all in the manner known.

The upper auxiliary arm section 56 is provided only at one end (its lower end) with a flattened eye 59 adapted to mate with the eye 58 of the arm section 55, both being hingedly connected by the bolt 60 and knurled nut 61. A bracket 62 secured by means of the screws 63 to the underside of a board 13 is provided with a longitudinal bore for the reception of the arm section 56. A boss 64 on the bracket 62 carries a set-screw 65 formed with a knurled head 66 for clamping the bracket 62 on the board 13 in adjusted position on the arm section 56.

The board 13 is made of any desired material shape and size and is provided on one edge with a shoulder or rest 13a to support a book in the manner readily apparent.

It will be apparent from the above described construction of the device that the same is capable of being used and mounted in any number of positions. The screw 28 on the bracket 10 may lock the eye 18 in two positions at right angles to each other and if removed will permit rotational movement of the eye 18 relative to the fixed mounting of the bracket 10 on the support. In the same manner the screw 46 shows the hinge 42 of the arm sections 40 and 41 of the main arm 11 locked, its removal however permitting the hinge 42 to function as such. The main arm 11 may be turned within its supporting eye 30 and the auxiliary arm 12 may be turned on its supporting arm 11. The board 13 may be turned in any angular position relative to the auxiliary arm section 55. In some cases it may be desirable to omit the eye-bolt 30 and to attach the main arm 11 directly to the eye 18 of the bracket 10.

When supporting bracket 10 is attached to arm of chair or elsewhere as shown in Figures 1 and 3 of the drawings, screw 28 is removed from bracket 10 eye 18 with arm 11 which may be rotated for any adjusted position for use, or to rest below and on the outside of arm of chair. When in rest position board or easel 13 assumes an adjusted vertical position entirely out of the way, thus it will be seen with this mounting hinge or board 42, is not needed and is locked. It is also locked in other mountings where the use of the joint is not needed. When bracket 10 is mounted on the face of post of an upholstered chair or other similar mountings, the face of base 15 assumes the vertical position although bracket 10 may be at the same time mounted in a vertical or in a horizontal position, which is made possible for convenience in mounting. Screw 28 is then engaged in either opening 29 or part opening 29a as necessity may demand thus locking eye 18. Eye bolt 30 is then adjusted and rotates with arm 11 while joint 42 is now unlocked thus enabling section 41 of the main supporting arm to be swung in any desired adjustable position for use or to be swung around arm of chair to rest.

While the device has been shown mounted on the arm of a plain chair the device may be mounted on the arm of an upholstered chair, a desk or other article of furniture and in fact on any supporting structure as for example a wall, door or window frame, bed, etc. It is to be understood that while one specific embodiment of this invention has been herein shown and described, numerous details of the construction shown may be altered or omitted without departing from the spirit of this invention as defined by the following claim.

Having thus set forth and disclosed the nature of this invention, what is claimed is:

A supporting bracket for an arm to be attached thereto comprising a base, a boss integral therewith, a bore extending through said boss and base, a circular recess in said base in concentric relation to said bore, an annular eye-element, a stem integral therewith and provided with a threaded extension adapted to rotatably fit within said bore, a circular nut seated in said circular recess having threaded engagement with said threaded extension, a pin extending transversely through said nut and threaded extension to prevent disengagement of the same, screw means in engagement with said base and nut to lock said eye-element against rotation and in one of a plurality of pre-determined angular positions relative to said bracket, and an eyebolt adjustably secured to said annular eye-element and to which said arm is attached.

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